Overview of Federal Fleet Sustainability and Energy Requirements





Mark Reichhardt, DOE-FEMP Navid Ahdieh, NREL Washington Auto Show January 28, 2014

Overview



- FEMP overview
- The overarching goal
- Reducing petroleum consumption
- Using alternative fuel
- Acquiring alternative fuel vehicles
- **Planning**
- Reporting
- Federal fleet performance
- Introduction to FEMP's Sustainable Federal Fleets website

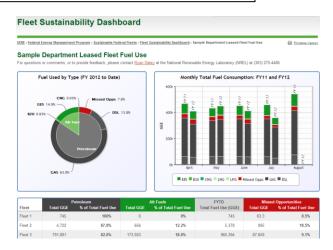
FEMP's Sustainable Federal Fleets Program



Mission:

Assist Federal agencies with meeting or exceeding requirements for reducing fleet petroleum consumption

- Understanding and meeting Federal requirements
 - Guidance
 - Handbook
 - FAST system maintenance, upgrades, and training
- Technical assistance, analysis, and tools
 - Fuel consumption dashboard (FleetDASH)
 - Geographic analysis of fleet fueling patterns, for facilitating development of new alternative fuel infrastructure
- Education and communication
 - federalfleets.energy.gov
 - INTERFUEL working group



Key Resources and Tools



- Guidance
 - Guidance on Federal Fleet Management
 - https://federalfleets.energy.gov/sites/default/files/static_page_docs/fleetguida nce 13514.pdf
- Handbook
 - Comprehensive Federal Fleet Management Handbook
 - https://federalfleets.energy.gov/sites/default/files/static_page_docs/eo13514 _fleethandbook.pdf
- federalfleets.energy.gov
 - FEMP's Sustainable Federal Fleets website
 - https://federalfleets.energy.gov/
- Alternative Fuel Station Locator
 - AFDC, Alternative Fuels Data Center
 - http://www.afdc.energy.gov/afdc/locator/stations/

The Overarching Energy Goal



REDUCE PETROLEUM CONSUMPTION

Why?

- Reduce greenhouse gas emissions
 - E.O. 13514 greenhouse gas reduction targets
- Reduce dependence on foreign oil imports
- Insulate against price volatility, thereby reducing costs

Reducing Petroleum Consumption



PETROLEUM REDUCTION REQUIREMENTS

Reduce petroleum consumption by 30% between 2005

and 2020 (2% per year)

E.O. 13423 and E.O. 13514

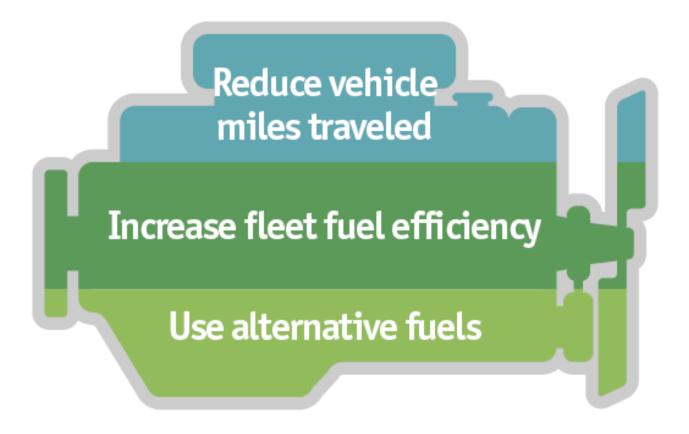
- EISA 2007, section 142



Reducing Petroleum Consumption



DRIVING PRINCIPLES OF PETROLEUM REDUCTION



FEMP Training Sessions at the 2014 Washington Auto Show

Wednesday, January 29	TOPIC
1:00 p.m.–2:00 p.m.	Partnering for More E85 Fueling Sites in the Greater Washington Region
2:15 p.m.–3:15 p.m.	Achieving Your Petroleum Reduction Requirements

Thursday, January 30	TOPIC
8:30 a.m.–9:30 a.m.	Understanding Driver Refueling Behavior
9:45 a.m.–10:45 a.m.	Using FleetDASH to Reduce Petroleum Consumption
2:15 p.m.–3:15 p.m.	Complying with the Requirement to Use Alternative Fuel in Dual- Fuel Vehicles (Section 701 of EPAct 2005)

JOIN US FOR OTHER SESSIONS ON TOOLS & STRATEGIES FOR **REDUCING PETROLEUM USE!**

Using Alternative Fuel



WHAT IS ALTERNATIVE FUEL?

- Biofuels (E85, biodiesel)
- Natural gas
- **Electricity**
- Propane
- Others



Using Alternative Fuel



Alternative fuel consumption requirements

- Increase alternative fuel consumption by 159.4% between 2005 and 2015 (10% per year compounded)
 - E.O. 13423
 - EISA 2007, section 142 (less stringent requirement)
- Dual-fuel vehicles must operate on alternative fuel unless a vehicle receives a waiver from DOE
 - EPAct 2005, section 701
- Covered Federal fleet fueling centers must install at least one renewable fuel pump (E85, B20 or greater, or electricity from renewable sources)
 - EISA 2007, section 246

Acquiring Alternative Fuel Vehicles



What are AFVs?

- Dedicated alternative fuel vehicles
- **Dual-fuel vehicles**
- Hybrid vehicles
- Low greenhouse gas-emitting vehicles (only where no access to alternative fuel)
- **Others**

Acquiring Alternative Fuel Vehicles



Requirements for acquiring AFVs

- 100% of light-duty and medium-duty passenger vehicle acquisitions must be low greenhouse gas-emitting vehicles
 - EISA 2007, section 141
- 100% of light-duty vehicle acquisitions must be AFVs by end of 2015
 - Presidential Memorandum on Federal Fleet Performance, May 2011
- 75% of covered light-duty vehicle acquisitions must be AFVs
 - EPAct 1992, section 303
- AFVs must be located where they have access to the appropriate alternative fuel
 - Presidential Memorandum on Federal Fleet Performance, May 2011
- Agencies must achieve their optimal vehicle inventory (number and type of vehicles) by end of 2015
 - Presidential Memorandum on Federal Fleet Performance, May 2011

Acquiring Alternative Fuel Vehicles



Strategic approach to maximizing petroleum reductions through AFV selection and placement

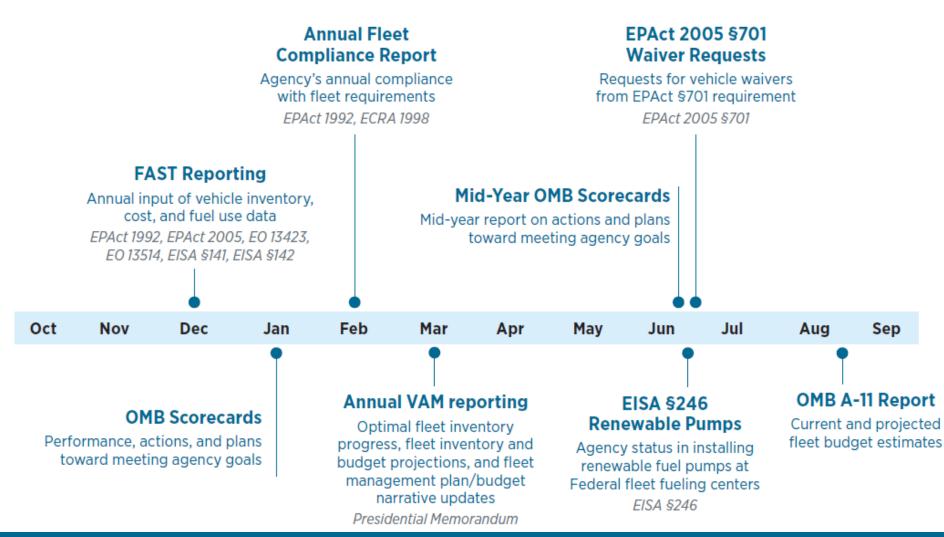
- 1. Where alternative fuel is available, select a dedicated alternative fuel vehicle or dual-fuel vehicle, and operate on the appropriate alternative fuel
- 2. Where alternative fuel is not available, select a petroleum-powered hybrid vehicle or low greenhouse gas-emitting vehicle



Planning requirements

- Strategic Sustainability Performance Plan (from E.O. 13514)
 - Plan for achieving requirements to reduce petroleum consumption and increase alternative fuel consumption
 - Plan for achieving optimal vehicle inventory by end of 2015
- EISA 2007, section 142
 - Rulemaking by DOE in process
 - Legislation and proposed rule require plan for achieving mandated reduction in petroleum consumption and increase in alternative fuel consumption
- Fleet Management Plan (from Presidential Memorandum on Federal Fleet Performance, May 2011)
 - Plan to achieve an optimal fleet inventory and to operate the fleet most efficiently

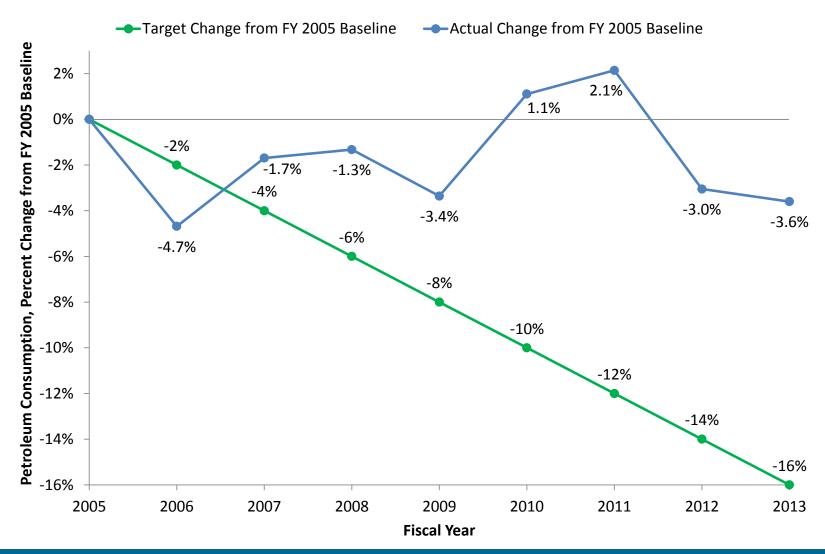
TIMELINE



Change in Petroleum Consumption, 2005-2013



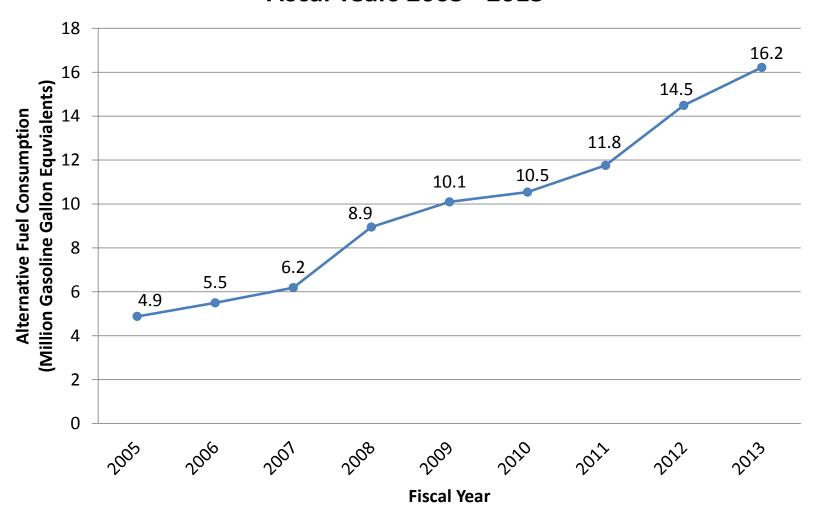
Change in Federal Fleet Petroleum Consumption, FY 2005 - FY 2013



Alternative Fuel Consumption, 2005-2013



Federal Fleet Annual Alternative Fuel Consumption, Fiscal Years 2005 - 2013



Federal Performance on Key Fleet Energy Metrics, FY 2013 (Preliminary)



Requirement		Performance
EO 13514 Petroleum Reduction	Reduce annual petroleum use by 16% from FY05 baseline (for FY13)	3.6 percent below baseline
EO 13423 Alternative Fuel Use	Increase alternative fuel use by 114.4% from FY05 baseline (for FY13), and alternative fuel use is greater than 5% of total fuel use	232.4 percent Alternative fuel 5.3% of total fuel use

Introduction to FEMP's Sustainable Federal Fleets Website



federalfleets.energy.gov

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